

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Ian A. Wilson et al. Art Unit :
Serial No. : Examiner :
Filed : HEREWITH
Title : SMALL MOLECULE MIMETICS OF ERYTHROPOIETIN

Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Prior to examination, please amend the application as follows:

In the specification:

Insert the following new paragraphs at page 1, before "Background of the Invention":

--Related Application Information

This application is a continuation of application serial no. 09/189,745, filed November 10, 1998, which is a continuation of application serial no. 08/641,071, filed April 26, 1996.

Statement as to Federally Sponsored Research

This invention is made with government support under Contract Nos. GM49497 and GM38794 by NIH. The government has certain rights in the invention.--

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December 21, 2001
Date of Deposit

Henry Jenkins
Signature

Henry Jenkins
Typed or Printed Name of Person Signing Certificate

Replace the paragraph on page 11, line 20, with the following rewritten paragraph:

--The coordinates for amino acids 1 to 225 of the human EPO receptor bound to peptide EMP1 are presented in the attached Table 3 in standard Brookhaven database format. Also included in Table 3 is a list of van der Waals interactions. These coordinates can be used in the design and identification of EPO mimetics according to the methods of the invention.--

On page 27, after line 15, insert the attached Tables (1, 2, and 3) into the specification.

In the Claims:

Cancel claims 1-6.

Add new claims 7 and 8 as follows.

--7. An erythropoietin mimetic identified by a method comprising computer-assisted steps for identifying potential mimetics of erythropoietin, using a programmed computer comprising a processor, a data storage system, and input device, and an output device, the method comprising the computer-assisted steps of:

(a) inputting into the programmed computer through said input device data comprising the three-dimensional coordinates of a subset of the atoms in the peptide GGTYSCHFGPLTWVCKPQGG (SEQ ID NO:1) when said peptide is co-crystallized with a portion of the erythropoietin receptor comprising amino acids 1 to 225 of said receptor, thereby generating a criteria data set;

(b) comparing, using said processor, said criteria data set to a computer database of chemical structures stored in said computer data storage system;

(c) selecting from said database, using computer methods, chemical structures having a portion that is structurally similar to said criteria data set;

(d) outputting to said output device the selected chemical structures having a portion similar to said criteria data set; and

(e) identifying compounds comprising said selected chemical structures as potential mimetics of erythropoietin, wherein said mimetic is not a peptide.

8. An erythropoietin mimetic identified by a method comprising a computer-assisted steps for identifying potential mimetics of erythropoietin, using a programmed computer comprising a processor, a data storage system, and input device, and an output device, the method comprising the steps of:

(a) inputting into the programmed computer through said input device data comprising the three-dimensional coordinates of a subset of the atoms in the peptide GGTYSCHFGPLTWVCKPQGG (SEQ ID NO:1) when said peptide is co-crystallized with a portion of the erythropoietin receptor comprising amino acids 1 to 225 of said receptor, thereby generating a criteria data set;

(b) comparing, using said processor, said criteria data set to a computer database of chemical structures stored in said computer data storage system;

(c) selecting from said database, using computer methods, chemical structures having a portion that is structurally similar to said criteria data set;

(d) outputting to said output device said selected chemical structures having a portion similar to said criteria data set;

(e) identifying compounds comprising said selected chemical structures as potential mimetics of erythropoietin;

(f) providing a compound identified in step (d); and

(f) testing the compound for a biological activity of EPO, wherein the tested compound is identified as an EPO mimetic if it tests positive for a biological activity of EPO and wherein the tested compound is not a peptide.--

Attorney's Docket No.: 07300-037003

Serial No. :

Filed : HERewith

Page : 4

REMARKS

This amendment is being filed together with a continuation application.

Applicant asks that all claims be examined. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 20 DEC 01

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VERSION WITH MARKINGS TO SHOW CHANGES

In the Specification:

Paragraph at page 11, line 20, has been amended as follows:

--The coordinates for amino acids 1 to 225 of the human EPO receptor bound to peptide EMP1 are presented in the attached [appendix] Table 3 in standard Brookhaven database format. Also included in [this appendix] Table 3 is a list of van der Waals interactions. These coordinates can be used in the design and identification of EPO mimetics according to the methods of the invention.--

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